

# Experiment 2 Preliminary Work

## Miscellaneous Opamp Circuits

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### Contents

<b>1</b>	<b>Step 1</b>	<b>2</b>
1.1	a) . . . . .	2
1.2	b) . . . . .	2
1.3	c) . . . . .	2
<b>2</b>	<b>Step 2</b>	<b>5</b>
<b>3</b>	<b>Step 3</b>	<b>8</b>
3.1	a) . . . . .	8
3.2	b) . . . . .	8
3.3	c) . . . . .	8
3.4	d) . . . . .	8
<b>4</b>	<b>Conclusion</b>	<b>10</b>

## 1 Step 1

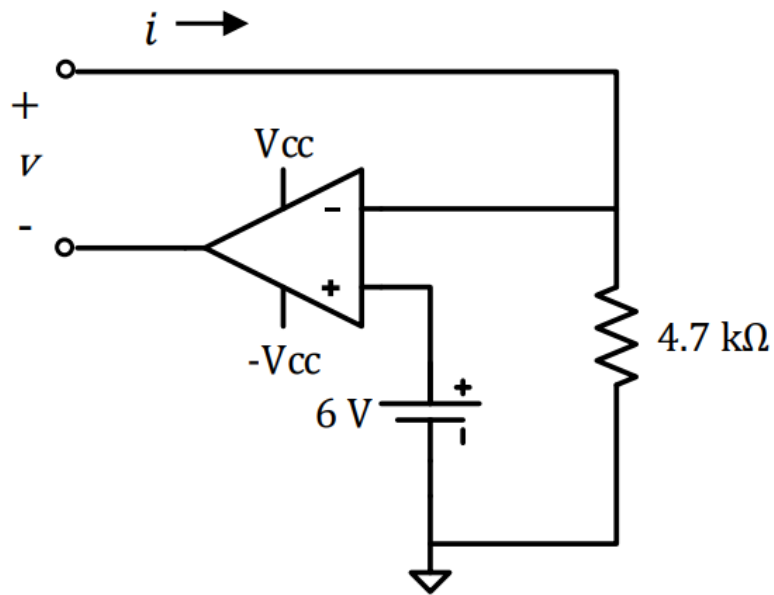


Figure 1: Circuit schematic for the step 1

1.1 a)

1.2 b)

1.3 c)

The simulation of the circuit given in Figure 1 is constructed in LTSpice environment. The schematic is given in Figure TODO .

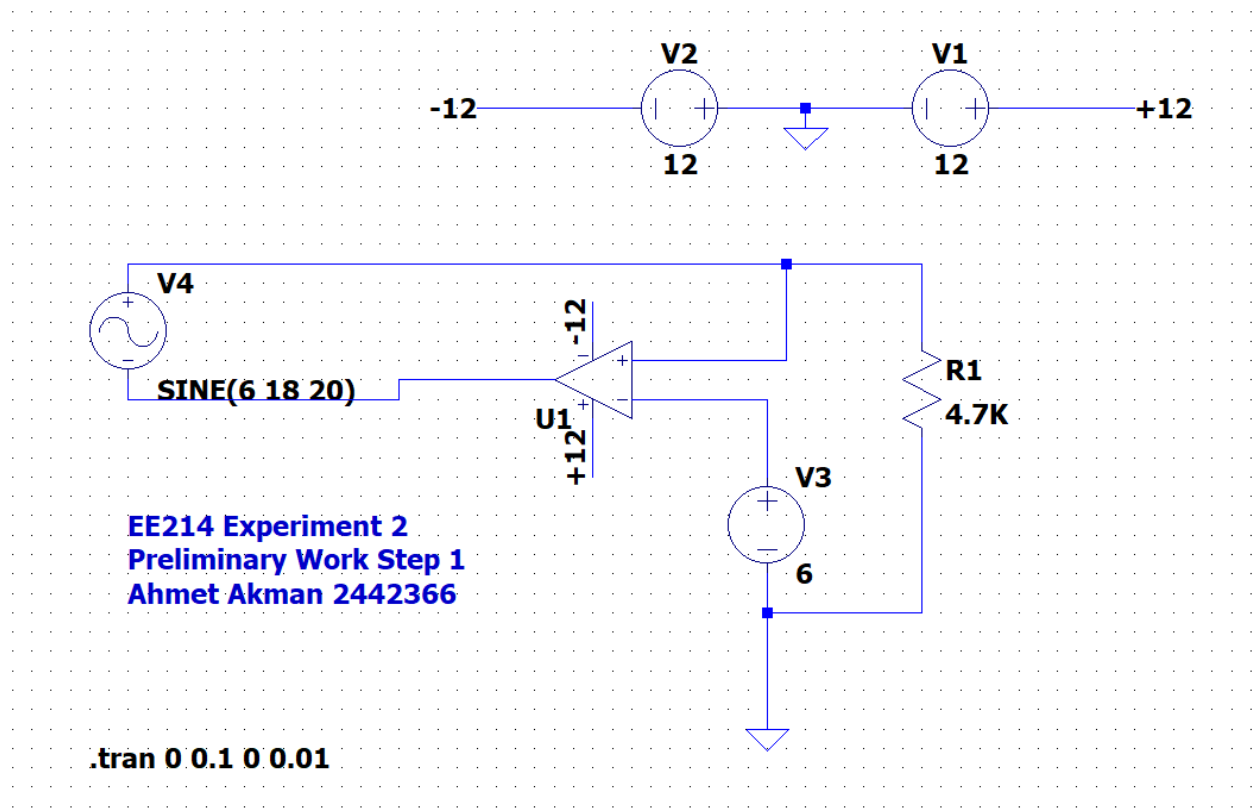


Figure 2: Circuit simulation schematic for the step 1

As a result, the plot given in Figure TODO is obtained.

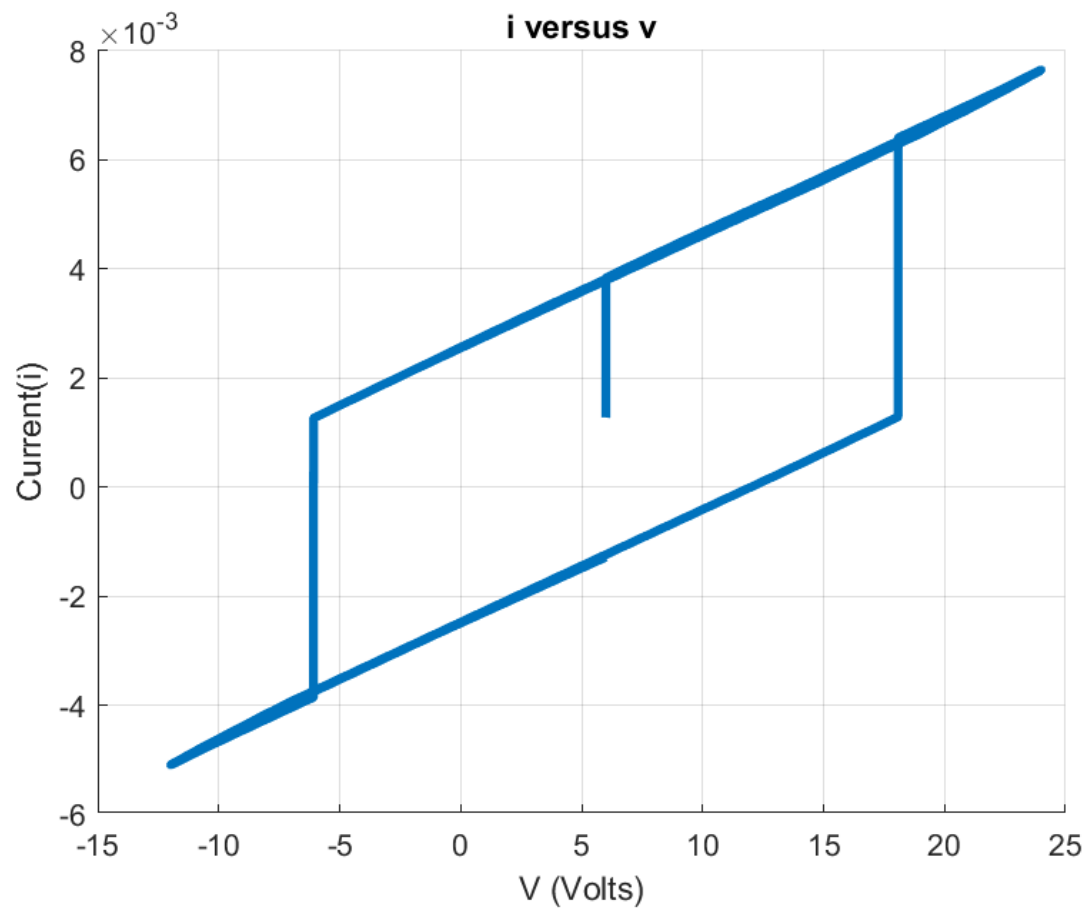


Figure 3:  $i$  versus  $v$  plot

## 2 Step 2

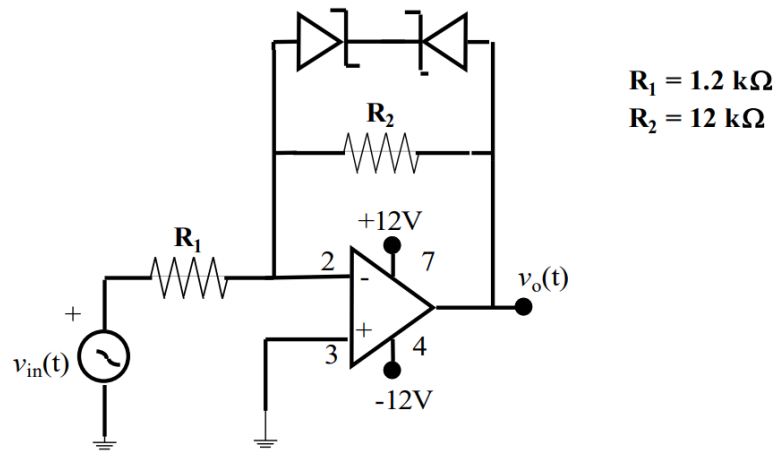


Figure 4: Circuit schematic for the step 2

The simulation of the circuit given in Figure TODO is constructed in LTSpice environment. The schematic is given in Figure TODO .

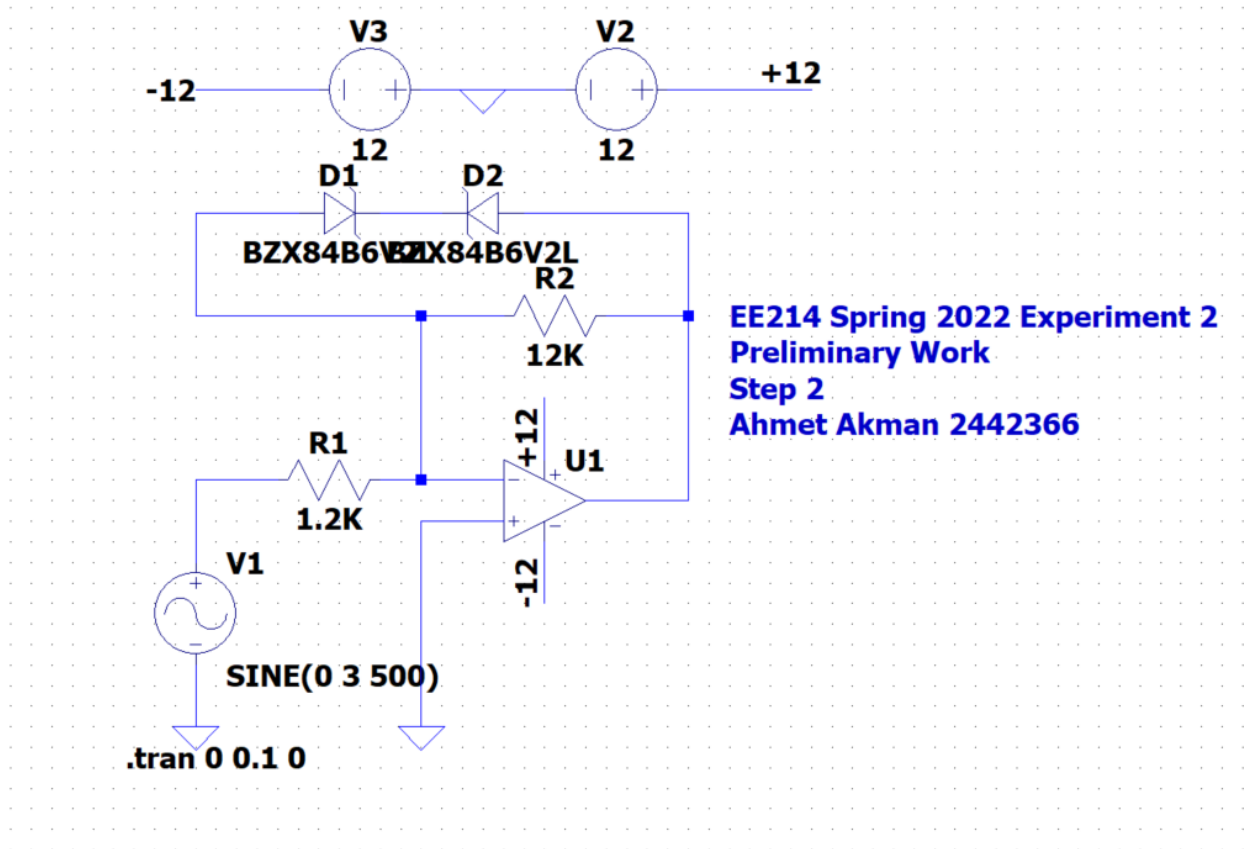


Figure 5: Circuit simulation schematic for the step 2

As a result, the plot given in Figure TODO is obtained.

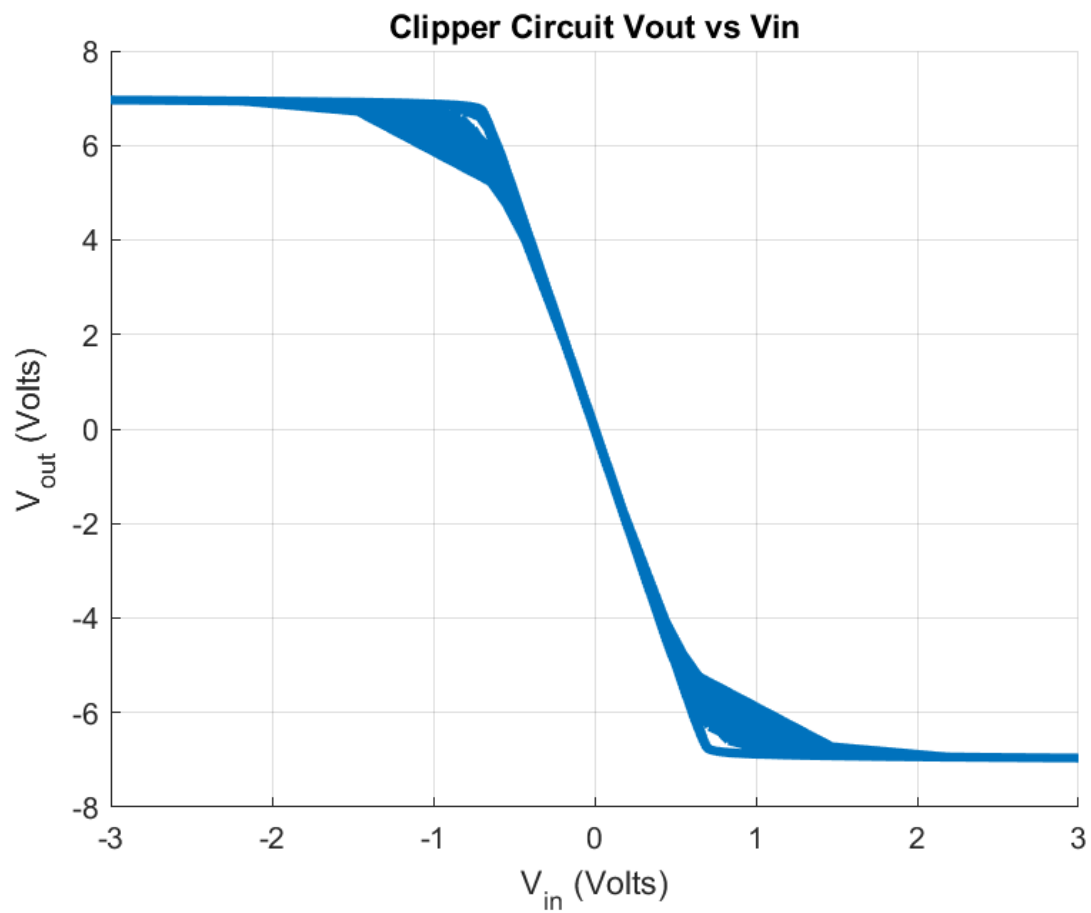


Figure 6:  $V_{in}$  and  $V_o$  versus time

### 3 Step 3

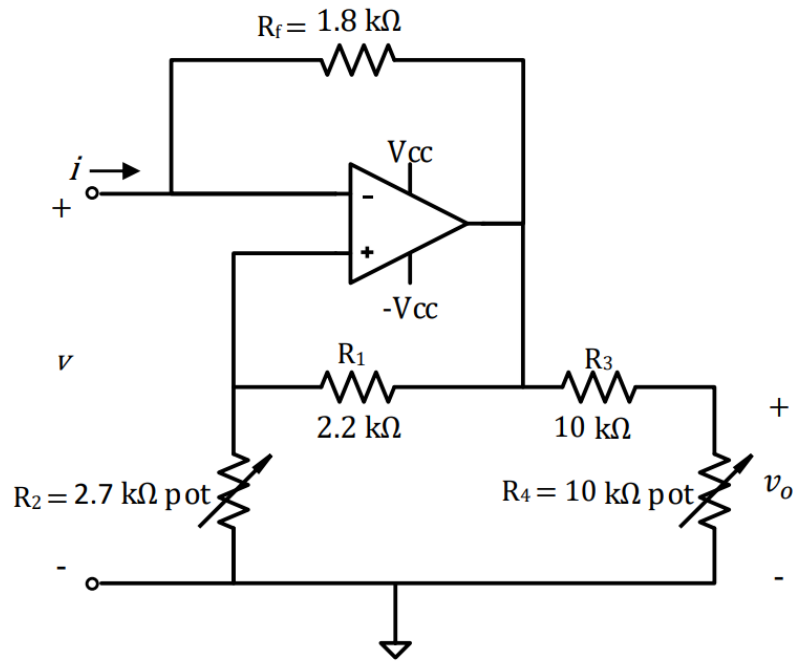


Figure 7: Circuit schematic for the step 3

3.1 a)

3.2 b)

3.3 c)

3.4 d)

The simulation of the circuit given in Figure TODO is constructed in LTSpice environment. The schematic is given in Figure TODO .



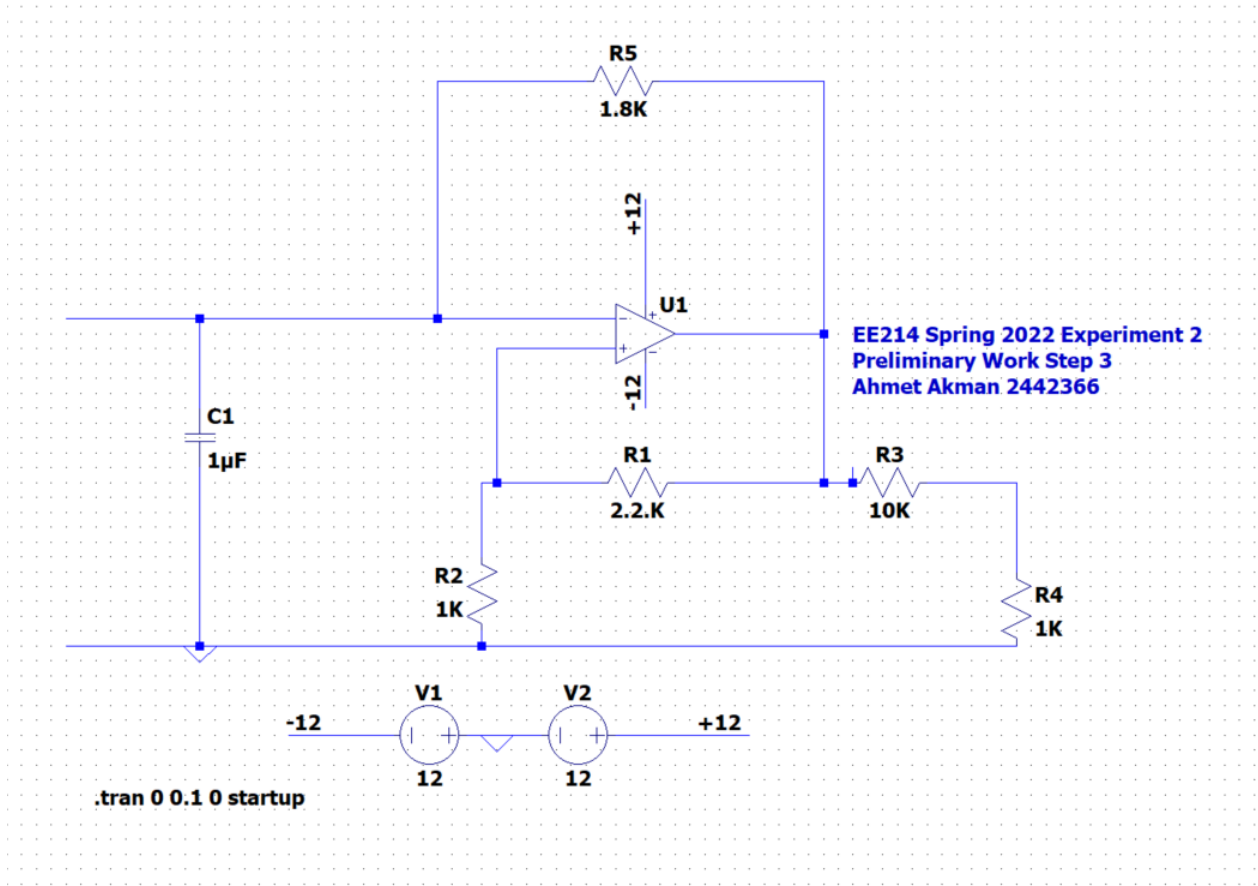


Figure 8: Circuit simulation schematic for the step 3

As a result, the plot given in Figure TODO is obtained.

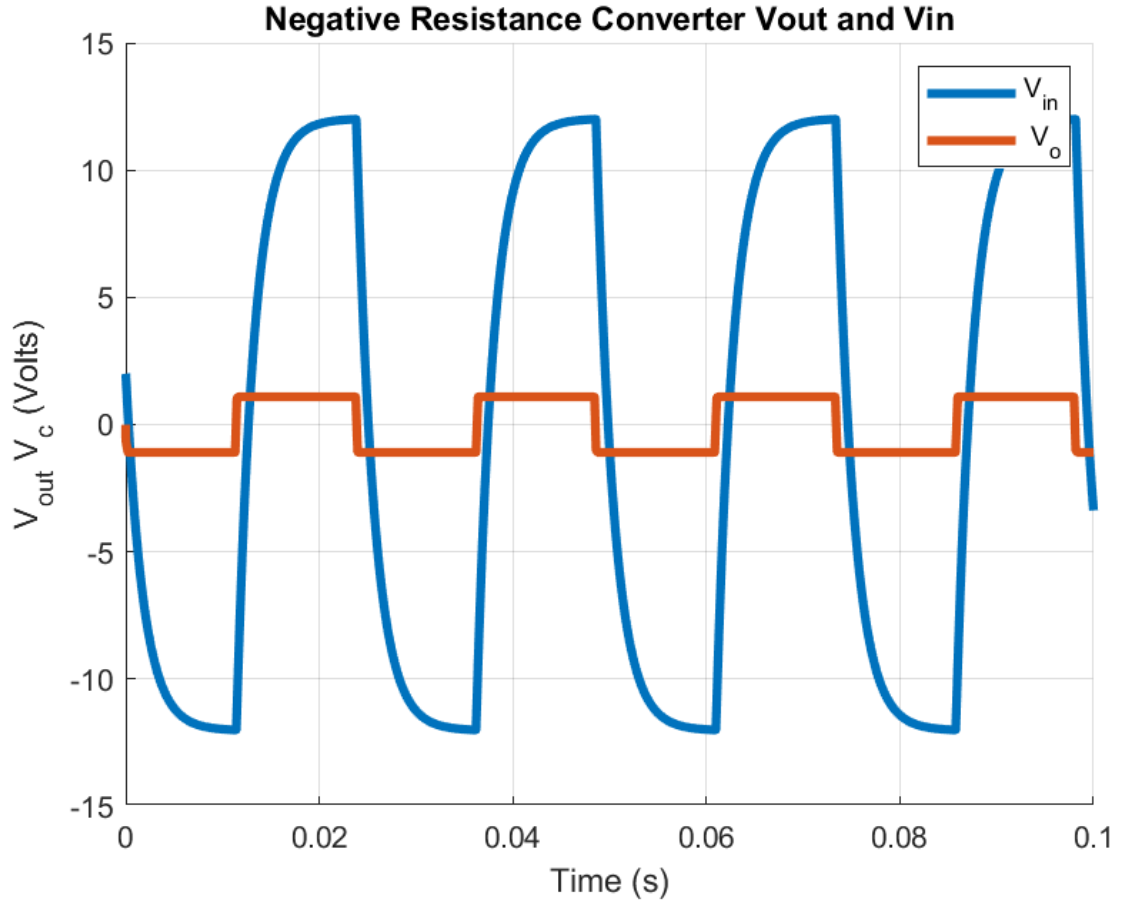


Figure 9:  $V_{in}$  and  $V_o$  versus time

## 4 Conclusion

### Appendix A

The results of the simulations are fetched from LTSpice and plotted in MATLAB in order to make the plots more readable and convenient.